REMARKS

Claims 1-51 remain pending in this application. Claims 1, 15-18, 21, 24, 29-30, 33-36, and 44-49 are independent. No claims have been amended, added, or canceled by this Response.

Lack of Enablement Rejection

Withdrawal of the rejection of claim 14 under 35 U.S.C. §112, first paragraph, as allegedly lacking enablement is requested.

The Examiner alleges that claim 1 "specifically claims a non-IP telephony signaling protocol." Applicant respectfully disagrees, as it appears that the Examiner may have misread the limitations of claim 1.

In particular, method claim 1 recites "...*adding non-IP telephony signaling protocol service reference information to an IP telephony signaling protocol message*; and sending the IP telephony signaling protocol message to a network node."

As can be seen from the above recitations, claim 1 does *not* claim a non-IP telephony signaling protocol. Instead, *claim 1 recites adding non-IP information to an IP message.* Further, dependent claim 14 recites that the IP telephony signaling protocol comprises H.323.

Applicant submits that the recitation of claim 14 is entirely consistent with the limitations of claim 1, and that a person with skill in the art, when presented with claims 1 and 14 and Applicant's disclosure, would be able to make and/or use the claimed invention. Further, support for the added limitations of claim 14 may be found throughout the originally-filed specification, including the originally-filed claims.

Accordingly, withdrawal of the rejection and allowance of claim 14 are requested.

Anticipation by Yoakum et al.

Withdrawal of the rejection of claims 1-4, 7-8, 13, 21, 22, 29, 33, 34 and 44-51 under 35 U.S.C. §102(e) as being anticipated by Yoakum et al. (US 6,735,621) ("Yoakum") is requested.

Applicants note that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.[1] There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.[2] To properly anticipate a claim, the reference must teach every element of the claim.[3] "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference".[4] "The identical invention must be shown in as complete detail as is contained in the …claim."[5] In determining anticipation, no claim limitation may be ignored.[6] In view of the foregoing authority, the cited reference fails to anticipate previously-presented independent claims 1, 21, 29, 33, 34, and 44-49.

Discussion of Applicant's Disclosure

By way of background, various embodiments and aspects of Applicant's disclosure are directed to providing a network node with service reference information. In order to provide a network node using an IP telephony signaling protocol, such as SIP, with service reference information needed for billing purposes, for example, the service reference information is added to an IP telephony signaling protocol message, and the IP telephony signaling protocol message is then sent to the network node.

One or more aspects of the disclosure relate to relaying service reference information with an IP (Internet Protocol -based) telephony signaling protocol used in IP-based networks. One example of service reference information is CAMEL-related information. CAMEL (Customized Applications for Mobile network Enhanced Logic) is an intelligent network-based solution standardized by ETSI (European Telecommunications Standards Institute) as one of the GSM (Global System for Mobile communications) phase 2+ services. One example of an IP telephony signaling protocol is SIP (Session Initiation Protocol) which is developed by IETF (Internet Engineering Task Force).

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[1] *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).
[2] *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).
[3] *See* MPEP § 2131.
[4] *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).
[5] *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).
[6] *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

One of the problems to be solved when implementing CAMEL to the network using SIP, is how to transfer at least mandatory CAMEL-related information used for charging purposes between network nodes/functions using SIP. In the GSM system, for example, CAMEL-related information is obtained by sending a routing number request. However, in SIP, such a mechanism does not exists.

One conventional solution to the above problem was to provide SIP with a routing number request mechanism corresponding to the one used in GSM to transfer CAMEL-related information. One problem found with this solution is that new messages would be required in SIP.

Embodiments of Applicant's disclosure are based upon realizing at least the above-recognized problem, and solving it by modifying an existing IP telephony signaling protocol message, such as a SIP INVITE message or a message acknowledging it, so that the service reference information, such as CAMEL-related information, may be transmitted in the IP telephony signaling protocol message. One advantage of Applicant's approach is that, by modifying an existing IP telephony signaling protocol message, service reference information can be transmitted without any new messages being required.

Applicant's disclosure is capable of being applied to any communications system where service reference is to be transferred between network nodes using an IP telephony signaling protocol. Such systems include, for example, the third generation mobile communications systems, such as UMTS, the corresponding mobile communications systems and combination systems utilizing mobile user equipment, and a fixed IP-based network. The service reference information may be CAMEL-related information, OSA-related (Open Service Architecture) information or Parlay API-related (Application Protocol Interface) information, for example. Examples of IP telephony signaling protocols are H.323, SIP and a SIP evaluation called SIP+. Applicant's inventive concept was described in the present disclosure by using the 3GPP AII-IP system utilizing CAMEL and SIP as examples, without restricting the inventive concept to these specific implementations.

Discussion of Yoakum

According to its Abstract, Yoakum is purportedly directed to a method and apparatus for messaging between disparate networks in which service control gateway (SCG) provides the capability to extend advanced intelligent network (AIN) services transparently between circuit switched and packet networks. In one embodiment, Yoakum supposedly works by translating signaling system 7 (SS7) transaction capabilities application part (TCAP) messages into session initiation protocol (SIP) INVITE messages. SIP messages, which may be responses to the translated messages referred to above, are translated back into TCAP messages. Data from messages is stored in an interaction database, a data structure maintained at the SCG. The SCG allegedly uses the interaction database to properly format translated messages for each network.

The Examiner asserts that Yoakum discloses adding SS7 signaling into SIP (see Abstract). Applicant respectfully disagrees with this characterization of Yoakum. Instead, Yoakum merely teaches translating SS7 TCAP messages into SIP INVITE messages. In other words, Yoakum teaches translation of information from non-IP protocol format into IP-protocol format so that the whole message is in IP protocol format, and thus a network using SIP can understand the information.

In contrast, however, in Applicant's claimed invention, information in a non-IP protocol format is added in the non-IP protocol format to a message that is in IP protocol format. The end result of Applicant's approach is that a message is sent in IP protocol format, but also contains information in a non-IP protocol format.

As the Examiner pointed out in paragraph 31, conventional solutions are based on *translations*, *i.e.*, information in a first protocol format is translated into a second protocol format, none of which suggests adding information as it is, without translation. For example, and as Applicant variously claims, TCAP information may be added "as is" to an SIP message, ISDN information may be added "as is" to an H.323 message, or TCAP information may be added "as is" to an H.323/H.450 message.

Further, with respect to independent claims 46, 47, 50, and 51, Yoakum discloses at col. 1:65 through col. 2:5 the use of INAP to extend the capabilities of SS7, and makes a

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reference therein to a publication purporting to relate to a description of the SS7 standards, but Yoakum is totally silent on INAP providing non-IP charging/billing identifiers for inter-network compatibility between SS7 and a INAP. Thus, Applicant submits that there is no technical basis for the Examiner's assertions with respect to the rejection of these claims.

Specific Deficiencies of Yoakum

Independent Claim 1

Yoakum et al. fails to disclose a method that includes, *inter alia*, "**adding non-IP telephony signaling protocol service reference information** to an IP telephony signaling protocol message; and sending the IP telephony signaling protocol message to a network node", as recited in previously-presented independent claim 1 (*emphasis* added).

Independent Claim 21

Further, the applied art fails to disclose a communications system providing IP telephony that includes, *inter alia*, "…*a first network node…arranged to add non-IP telephony signaling protocol service reference information relating to a call made to the user equipment to an IP telephony signaling protocol message* and to send the IP telephony signaling protocol message to the second network node…", as recited in previously-presented independent claim 21 (*emphasis* added).

Independent Claim 29

Still further, the applied art fails to disclose a communications system providing IP telephony that includes, *inter alia*, "…a first network node…wherein the first network node is arranged to add first service reference information relating to a call made to the user equipment to an IP telephony signaling protocol message initiating a session…*wherein the first service reference information is non-IP telephony signaling protocol service information*", as recited in previously-presented independent claim 29 (*emphasis* added).

Independent Claim 33

In addition, the applied art fails to disclose "[a] network node in a communications system providing IP telephony, wherein the network node comprises *means for adding non-IP telephony signaling protocol service reference information* to an IP telephony signaling protocol message", as recited in previously-presented independent claim 33 (*emphasis* added).

Independent Claim 34

Still further, the applied art fails to disclose "[a] network node in a communications system providing IP telephony, wherein the network node comprises *means for separating non-IP telephony signaling protocol service reference information* from an IP telephony signaling protocol message", as recited in previously-presented independent claim 34 (*emphasis* added).

Independent Claim 44

Furthermore, the applied art fails to disclose "[a] processor configured to *add non-IP telephony signaling protocol service reference information to an IP telephony signaling protocol message*," as recited in previously-presented independent claim 44 (*emphasis* added).

Independent Claim 45

Still further, the applied art fails to disclose "[a] processor configured to *separate non-IP telephony signaling protocol service reference information from an IP telephony signaling protocol message*," as recited in previously-presented independent claim 45 (*emphasis* added).

Independent Claim 46

In addition, the applied art fails to disclose "[a] processor configured to separate a charging identifier to be used in billing as charging correlation information from an SIP message," as recited in previously-presented independent claim 46 (*emphasis* added).

Independent Claim 47

In addition, the applied art fails to disclose "[a] processor configured to *generate a charging identifier to be used in billing as charging correlation information and to add at least the charging identifier to an SIP message*," as recited in previously-presented independent claim 47 (*emphasis* added).

Independent Claim 48

In addition, the applied art fails to disclose "[a] computer readable medium having a computer-executable software routine comprising *adding non-IP telephony signaling protocol service reference information to an IP telephony signaling protocol message*," as recited in previously-presented independent claim 48 (*emphasis* added).

Independent Claim 49

Finally, the applied art fails to disclose "[a] computer readable medium having a computer-executable software routine comprising *separating non-IP telephony signaling protocol service reference information from an IP telephony signaling protocol message*," as recited in previously-presented independent claim 49 (*emphasis* added).

Accordingly, since the applied art fails to disclose all the claimed limitations, reconsideration and allowance of independent claims 1, 21, 29, 33, 34, and 44-49 are respectfully requested.

Further, since dependent claims 2-14, 19-20, 22-23, 37, and 51 variously and ultimately depend from patentable independent claims 1, 21, and 33, these claims are submitted as being allowable at least on that basis, without further recourse to the additional patentable features recited therein.

Unpatentability Rejection over Yoakum et al.

Withdrawal of the rejection of claims 11, 12, 14, and 37 under 35 U.S.C. §103(a) as allegedly being unpatentable over previously cited Yoakum et al. is requested. The Examiner has failed to make a *prima facie* case of unpatentability because the applied art does not teach or

suggest at least the claimed limitations of independent claims 1 and 33 from which claims 11, 12, 14, and 37 variously depend.

In addition, the Examiner improperly alleges that admitted deficiencies of the primary reference to Yoakum et al. are features that are either "well known to those of ordinary skill in the art" or "inherent." Applicant respectfully traverses the Examiner's assertion that various claimed limitations are "well known" and/or 'inherent," as discussed further below.

Further, the Examiner relies upon an allegation with respect to dependent claim 14 that the H.323 protocol is an IP-related signaling protocol and therefore cannot depend from claim 1. Applicant has previously rebutted this mistaken position above in the response to the enablement rejection of claim 14.

Legal Requirements for Unpatentability

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria offer useful insights. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art reference must teach or suggest all the claim limitations.*[7] Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.[8] The Supreme Court recently held that it is necessary, *inter alia*, for a court to look to interrelated teachings of multiple patents in order to determine whether there was an apparent reason to combine the known elements in the claimed. In this regard, the Court held "[t]o facilitate review, this analysis should be made explicit."[9] "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."[10]

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[7] *See* MPEP §2143.
[8] *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and *See* MPEP §2143.
[9] *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. ___ (2007) (*see* p. 14).
[10] *See Id.*, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Specific Deficiencies of the Applied Art

The Examiner asserts in paragraph 21 of the office action that Yoakum's IP network 108 uses SIP, and that "it is inherent that a network using SIP must be able to add/separate/use the SS7 service reference information delivered in the SIP messages."

Whether or not this "inherency" is present, it is submitted as being entirely irrelevant to the specific recitations of dependent claims 11, 12, 14, and 37, particularly as discussed above with respect to the alleged anticipation of independent claims 1 and 33 by Yoakum. The Examiner apparently has misunderstood the novel and non-obvious aspects of Applicant's claimed invention, as discussed above.

The Examiner further admits that Yoakum et al. does not specifically disclose that the telephony signaling protocol is OSA, Parlay API, or H.323 with respect to dependent claims 11, 12, 14, and 37, but then takes "Official Notice" that H.323 is an IP-related signaling protocol and asserts "[m]ore importantly, such signaling protocols are well known to those of ordinary skill in the art [and] [m]oreover, adding service reference information to each of these well-known telephony standards in the *intent* of these protocols."

Whether or not the Examiner's contention that "adding service reference information to each of these well-known telephony standards in the *intent* of these protocols" is completely correctly correct, Applicant submits that the Examiner's contentions are irrelevant with respect to dependent claims 11, 12, 14, and 37, which variously depend from independent claims 1 and 33.

In particular, the applied art, taken alone or in combination, clearly does not teach or suggest a method that includes, *inter alia*, "***adding non-IP telephony signaling protocol service reference information*** to an IP telephony signaling protocol message; and sending the IP telephony signaling protocol message to a network node", as recited in previously-presented independent claim 1 (***emphasis*** added), from which claims 11, 12, and 14 depend.

Further, the Examiner admits that Yoakum et al. does not specifically disclose that the network node comprises a call state control function with respect to dependent claim 37, but then asserts that "such functionality is well known in the art".

Whether or not such functionality is, indeed, "well-known", the applied art, taken alone or in combination, clearly does not teach or suggest "[a] network node in a communications system providing IP telephony, wherein the network node comprises *means for adding non-IP telephony signaling protocol service reference information* to an IP telephony signaling protocol message", as recited in previously-presented independent claim 33, from which claim 37 depends (*emphasis* added).

Accordingly, since the applied art does not teach or suggest all the claimed limitations of the respective independent claims, reconsideration and allowance of claims 11, 12, 14, and 37 are respectfully requested.

Improper Assertion of "Well Known" Features

Applicant traverses the Examiner's assertion of "well known" features as outlined above. In terms of reliance upon common sense or common knowledge, in *Zurko*, the Federal Circuit reiterated to the Board of Appeals the following:

> … the deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is "basic knowledge" or "common sense" to one of ordinary skill in the art…the Board contended that even if the cited UNIX and FILER2 references did not disclose a trusted path, "it is basic knowledge that communication in trusted environments is performed over trusted paths" and, moreover, verifying the trusted command in UNIX over a trusted path is "nothing more than good common sense." *Ex parte Zurko*, slip op. at 8.

> We cannot accept these findings by the Board. This assessment of basic knowledge and common sense was not based on any evidence in the record and, therefore, lacks substantial evidence support. As an administrative tribunal, the Board clearly has expertise in the subject matter over which it exercises jurisdiction. This expertise may provide sufficient support for conclusions as to peripheral issues. With respect to core factual findings in a determination of patentability, however, the Board cannot simply reach conclusions based on its own understanding or experience -- or on its assessment of what would be basic knowledge or common sense.

> Rather, the Board must point to some concrete evidence in the record in support of these findings. To hold otherwise would render the process of appellate review for substantial evidence on the record a meaningless exercise. *Baltimore & Ohio R.R. Co. v. Aderdeen & Rockfish R.R. Co.*, 393 U.S. 87, 91-92 (1968) (rejecting a determination of the Interstate Commerce Commission with no support in the record, noting that if the Court were to

conclude otherwise "[the] requirement for administrative decisions based on substantial evidence and reasoned findings -- which alone make effective judicial review possible -- would become lost in the haze of so-called expertise".

Accordingly, we cannot accept the Board's unsupported assessment of the prior art.[11]

More recently, the Federal Circuit pointed out in *Lee*[12] that the PTO must give full reasoning as to what motivation or teaching in the prior art would suggest combining [or modifying] references relied on in an obviousness rejection; and that ***an Examiner's general common knowledge and common sense do not substitute for the authority required by law to reject a claim for obviousness***.

In *Lee*, all claims in a patent application by Sang Su Lee ("Lee") were denied. On appeal, the Board held that the Examiner's conclusory statements constituted a well-reasoned discussion of why one should combine references relied on in the obviousness rejection. Because the only "reasoning" relied on was the Examiner's "common knowledge and common sense," the court concluded there was no showing to suggest that combining the references had been anything more than impermissible hindsight. Therefore, the court vacated and remanded.

Applicant submits that this case is directly on point. The Official Action does not establish the proper motivation to modify Yoakum et al. in the manner suggested, and relies solely upon the Examiner's mere assertion that certain claimed limitations are "well known" or common knowledge, and that the claimed functions are the "intent" of the various protocols listed by the Examiner. The Examiner does not establish the proper motivation to provide a solution as claimed by Applicant, does not provide any evidence as to the "intent" of the various protocols, and further does not provide a properly combinable reference that provides such a teaching, as required.

If, as the Examiner alleges, these dependent claim limitations are indeed "well known", then it should present no burden to the Examiner to provide a ***properly combinable reference*** that teaches the missing limitations if a Notice of Allowability is not forthcoming in response to this Amendment.

Accordingly, withdrawal of the rejection and allowance of claims 11, 12, 14, and 37 are respectfully requested on these additional grounds.

Allowable Subject Matter

Applicant appreciates the indication that claims 15-18, 24-28, 30-32, 35-36, and 38-43 are *allowed*.

Applicant further notes with appreciation the indication that claims 5-6, 9-10, 15-20, 23-28, 30-32, 35, 36, and 38-43 are drawn to allowable subject matter, and would be allowed if rewritten in independent form. Given the arguments presented above, Applicant submits that amendment to independent claims 1 and 21 from which these claims variously depend is submitted as not being necessary for allowance. Allowance of claims 5-6, 9-10, 15-20, 23-28, 30-32, 35, 36, and 38-43 is requested.

Conclusion

All rejections having been addressed, Applicant submits that each of pending claims 1-51 in the present application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes that an interview would be helpful in resolving any outstanding issues in this case, the Undersigned Attorney is available at the telephone number indicated below.

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[11] *In re Zurko*, 258 F.3d 1379, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001).
[12] *In re Sang Su Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir 2002).

For any fees that are due, including fees for extensions of time, please charge Deposit Account Number 03-3975 from which the Undersigned Attorney is authorized to draw. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Date: January 23, 2008   Respectfully submitted,

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